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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,327	03/01/2000	Paul S Prevey III	LRI-004PAT	3718

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Mark F Smith
Smith Gutttag & Bolin Ltd
7577 central park boulevard
suite 302
mason, OH 45040

EXAMINER

MARTIR, LILYBETT

ART UNIT PAPER NUMBER

2855

DATE MAILED: 12/03/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,327

Applicant(s)

PREVEY, PAUL S

Examiner

Lilybett Martir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In Claims 1 and 9, the language utilized doesn't clearly indicate how the method disclosed reduces the tensile stress in the surface of a part.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by Prevey,III (Pat. 5,826,453). Prevey teaches the claimed method including:

- Selecting a region of the part to be treated (Col. 8, line 55) and exerting pressure against the surface of the selected region (Col. 2, line 62), the pressure being applied such that the magnitude of compression decreases in the direction towards the boundaries of the selected region to minimize the

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effects of any tensile stress zones near the boundaries, as inherently disclosed in Col. 8, lines 57-59, as in claim 1

- Exerting the pressure against the surface of the part by a burnishing operation (Col. 8, line 57), as in claim 2.
- A burnishing operation that induces a deep layer of compression within the surface having associated cold working of less than about 5.0 percent as inherently disclosed in Col. 8, lines 57-60 as in claims 3 and 10.
- Exerting the pressure on the surface by inducing a deep layer of compression within the surface having associated cold working of less than about 3.5 percent (Col. 8, line 60), as in claims 4 and 11.
- Comprising the step of selecting the magnitude of compression by programming a control unit to automatically reduce the magnitude of compression (Col. 3, lines 37-40) in the direction towards the boundaries of the selected region, as in claim 5.
- Comprising in the step of exerting pressure against the surface of the selected region the step of programming a control unit to control the application of the pressure (Col. 3, lines 33-35), as in claim 6.
- A burnishing operation that includes varying the burnishing density along the boundaries along the boundaries of the selected region (Col. 2, lines 57-60), as in claim 7.

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- The part is selected from the group consisting of automotive parts, aircraft parts, marine parts, engine parts, motor parts, machine parts, drilling parts, construction parts and pump parts(Col. 4, line 4), as in claim 8.
- Selecting a region of the part to be treated (Col. 8, line 55) and programming a control unit of a burnishing apparatus to perform a burnishing operation (Col. 3, lines 4-8), the burnishing operation being performed such that the density of burnishing and the magnitude of compression are varied to reduce the high tensile stress zone along the boundaries of the selected region (Col. 2, lines 57-60), as in claim 9.

Claim 1 discloses a pressure applied such that the magnitude of compression decreases in the direction toward the boundaries of the selected region, inherently disclosed in Col. 8, lines 57-59, since a zone of deformation is formed by compressions of different magnitudes that are exerted over a surface in a selected pattern. Claims 3 and 10 include a variation in the range of cold working to modify the layer retention of residual stress to improve fatigue and stress corrosion performance of workpieces that is inherently disclosed in Col. 8, lines 57-60.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Linzell (Pat. 5,643,055) Shaping metals. Discloses a way to shape a metal workpiece by rubbing contact over a surface that is continuous.

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- Beckman et al. (Pat. 4,360,143) Method of manufacturing suspension members. Discloses a method for manufacturing suspension members by pre-testing and subjecting said members to maximum forces resulting in cold working.

Response to Arguments

Applicant's arguments filed on September 12, 2001 have been fully considered but they are not persuasive. The teachings of Prevey,III (Pat. 5,826,453) inherently discloses the claimed invention since the application of a force to any surface using the burnishing apparatus with a burnishing ball such as in element 114 inherently produces a surface deformation with less deformation of the surface toward the boundaries of the selected region.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LM

Lilybett Martir
Examiner
Art Unit 2855

LM

November 19, 2001

LM